

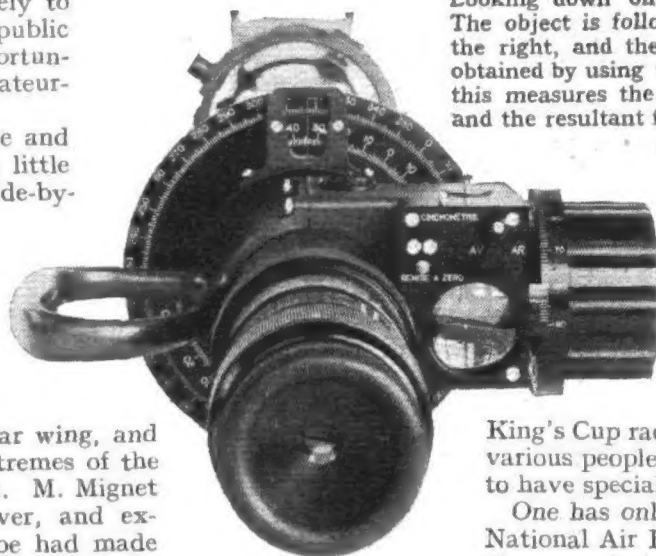
the *Pou* principle, though it is likely to be some time before the general public recovers from the effect of the unfortunate accidents which occurred to amateur-built examples in this country.

The H.M.210 is very unlike these and was one of the most workmanlike little machines in the Show. It is a side-by-side cabin two-seater with the familiar single-control layout—in this case split into dual from a central forked column. Lateral movement operates the rudder, and the fore and aft movement, as before, tilts the main plane. Additionally, however, there is now a full-span elevator for the rear wing, and this comes into use only at the extremes of the fore and aft movement of the stick. M. Mignet himself is still as optimistic as ever, and explained this and another of its type had made 2,500 flights. One or two examples even of the old single-seater type are apparently still flying in France. We may yet see more of the *Pou* in this country.

If somebody asked me if there was any particularly good feature about any of the French light aeroplanes I should say that it was the way in which, on the majority of the machines, the doors were arranged to open. On the H.M.210 and on several other types the doors are hinged at the top so that there is any amount of entry space. Such an arrangement, too, should permit an aerobatic certificate to be obtained in the case of any machines which are otherwise suitable. At present, in this country, an aerobatic certificate is only provided in the case of cabin machines in which the door on each side is instantaneously removable. The point of this, without a similar demand that a parachute be carried, has always escaped me.

In a small way the old Kellner-Béchereau bi-mono-plane still seems to offer possibilities of development. This has its wing in two longitudinal sections, that at the rear providing slot effect, flap effect, or aileron control according to its angle in relation to that at the front. Here is one way in which the effect of an infinitely variable wing section might be provided, and somebody over here might consider it worth his while to carry on with the experiments.

The appearance of the pretty semi-mock-up Lignel Mistral racer set me off on a special train of thought. It might be said to follow the familiar Mew Gull formula—and the Mew Gull, as a racer, is the product of what can only be called the unsubsidised state of racing competition in this country. The sort of sportsman pilot who enters for races cannot usually afford a machine with an engine



Looking down on the Bronzavia tail drift-sight. The object is followed by moving the control on the right, and the speed of the machine may be obtained by using the special stop-watch beside it; this measures the time of angular displacement, and the resultant figure, with the machine's height, gives the speed.

powered with much more than 200 h.p., and all the efforts have so far been expended in getting the utmost out of this power. If, however, prizes of a reasonable magnitude were put up for, say, the

King's Cup race, there might be a chance that various people would find it worth their while to have special racing weapons built for them.

One has only to look at the entries for the National Air Races in Cleveland, America, to discover what handsome prize money can do.

Admittedly, the majority of the entries are freak machines following the same old low-power, high-performance formula, but this year's big race was won by a real machine with a real engine at an average speed of about 280 m.p.h.—which is pretty good going over a course so small that all the fastest machines are in an almost perpetual turn. Presumably, the Pesco Special (or Turner-Laird) has a level speed of very well over 300 m.p.h. But that is by the way.

Just one word about engines. I wonder how many visitors noticed the Lorraine Alcol radial with a direct injection system. Actually, "direct injection" is a misnomer, as the fuel is injected into the induction system, which is air-fed by a blower. Apparently, this particular variation of the Alcol has done quite a lot of flying. The advantages of direct injection for aerobatic and military work are obvious, and such a system permits much greater latitude in valve timing than is possible with a normal carburettor. Presumably, one of the difficulties is to design the pump and the injectors to give good economy throughout a normal engine life. The idea of cutting off the fuel supply rather than throttling the whole inlet certainly makes one think of nice cool cylinders and a longer mechanical life.

Bits and Pieces

For those who had the time to browse amongst the stands in the gallery, there was far more of interest up there than a casual look round might suggest. On the whole, too this country was better represented among what are casually known as accessories than with aircraft as such.

For sheer range of interest the Bronzavia stand probably took the prize, and this stand could not be considered to be altogether foreign, since the British Avimo concern holds the sales and manufacturing rights for the various Bronzavia items, which varied from lightweight radio equipment, through navigation and oxygen supply items, to the flame-damping exhaust systems which could be seen on quite a number of French machines. Some of the radio equipment was on the French secret list and consequently inexplicable, but there was an interesting lightweight layout for commercial machines (and at present used by Air Bleu on their mail-carrying Caudron Simouns), which seemed to be quite extraordinarily well made as well as light—if the figure which I took down is quite correct. This combined transmitter and receiver, working on a wavelength of 500 to 1,000 metres, and including the generator, weighs only 27 kg. (60 lb.). Following present-day ideas, there are six spot-controlled wavelengths.

Another specially interesting device on the stand was the *cinema-derivometre periscopique*. This is a tail drift-sight, with other useful applications, and designed for absolute accuracy with the aid of a specially controlled sighting bubble. In the ordinary way the sight is adjusted and turned so that the object may be followed on the bubble down a grid wire, but an additional bearing ring is provided for navigational assistance, and, more interesting still, there is a stop-watch arrangement by which the actual



Franco-British interlude I: M. Lebrun, the President, accompanied by M. Guy la Chambre, the Air Minister, inspects the Rolls-Royce Merlin. The imposing back view will be recognised as that of Mr. Golovine, R.-R. Continental representative, while in uniform is Group Capt. D. Colyer, D.F.C., our Air Attaché in Paris.